Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An optical apparatus ~~comprising,~~comprising:

a frequency stabilized linear HeNe gas laser having a resonant cavity, ~~and optical elements, wherein~~ the resonant cavity ~~is~~ being filled with a gas including a He content and a Ne content, the Ne content comprising a Ne^{20} isotope and a Ne^{22} isotope in substantially equal ~~proportions~~ proportions; and

~~wherein the optical elements during operation of the optical apparatus cause~~at least one optical feedback element which receives light output from the laser and returns at least 0.1% of the light output of the laser ~~to be returned~~ towards the laser.

2. (Canceled)

3. (Currently Amended) An interferometric displacement determination device having an optical apparatus ~~comprising,~~comprising:

a frequency stabilized linear HeNe gas laser having a resonant cavity, ~~and optical elements, wherein~~ the resonant cavity ~~is~~ being filled with a gas including a He content and a Ne content, the Ne content comprising a Ne^{20} isotope and a Ne^{22} isotope in substantially equal ~~proportions~~ proportions; and

~~wherein the optical elements during operation of the optical apparatus cause~~at least one optical feedback element which receives light output from the laser and returns at least 0.1% of the light output of the laser ~~to be returned~~ towards the laser, the device being any one of a single beam, a plane mirror, a long range, or an optical fibre type.

4. (Previously Presented) An interferometric displacement determination device as claimed in claim 3 wherein the Ne^{20} and Ne^{22} isotope content is in the ratio of from about 60:40 to about 40:60 respectively.

5. (Previously Presented) An interferometric displacement determination device as claimed in claim 3 wherein the HeNe gas ratio is from about 80:20 to about 90:10 respectively.

6. (Previously Presented) An optical apparatus as claimed in claim 1 wherein the laser achieves a frequency stabilization below $1x10^{-7}$ (Frequency noise/Absolute frequency) and the optical feedback is in the range of 0.1% to 10% of the light output of the laser.

7. (Previously Presented) An optical apparatus as claimed in claim 1 wherein the apparatus or the device includes an optical fibre element.

8. (Previously Presented) An optical apparatus as claimed in claim 6 wherein the method of frequency stabilization employed is modal control.

9. (Previously Presented) An optical apparatus as claimed in claim 8 wherein the modal control is control of the ratio of the intensities of two laser modes.

10. (Currently Amended) An interferometric displacement determination device having an optical apparatus comprising, a frequency stabilized linear HeNe gas laser having a resonant cavity, ~~and optical elements, wherein~~ the resonant cavity ~~is~~ being filled with a gas including a He content and a Ne content, the Ne content comprising a Ne^{20} isotope and a Ne^{22} isotope in substantially equal ~~proportions~~ proportions; and

~~wherein the optical elements during operation of the optical apparatus cause~~ at least one optical feedback element which receives light output from the laser and returns at least 0.1% of the light output of the laser ~~to be returned~~ towards the laser.

11. (Currently Amended) A polarization measurement device having an optical apparatus comprising, a frequency stabilized linear HeNe gas laser having a resonant cavity, ~~and optical elements, wherein~~ the resonant cavity ~~is~~ being filled with a gas including a He

content and a Ne content, the Ne content comprising a Ne^{20} isotope and a Ne^{22} isotope in substantially equal ~~proportions~~ proportions; and

~~wherein the optical elements during operation of the optical apparatus cause~~ at least one optical feedback element which receives light output from the laser and returns at least 0.1% of the light output of the laser ~~to be returned~~ towards the laser.

12. (Currently Amended) A spectroscopic analysis apparatus having an optical apparatus comprising, a frequency stabilized linear HeNe gas laser having a resonant cavity, ~~and optical elements, wherein~~ the resonant cavity ~~is~~ being filled with a gas including a He content and a Ne content, the Ne content comprising a Ne^{20} isotope and a Ne^{22} isotope in substantially equal ~~proportions~~ proportions; and

~~wherein the optical elements during operation of the optical apparatus cause~~ at least one optical feedback element which receives light output from the laser and returns at least 0.1% of the light output of the laser ~~to be returned~~ towards the laser.

13. (Currently Amended) A heterodyne frequency measurement device having an optical apparatus comprising, a frequency stabilized linear HeNe gas laser having a resonant cavity, ~~and optical elements, wherein~~ the resonant cavity ~~is~~ being filled with a gas including a He content and a Ne content, the Ne content comprising a Ne^{20} isotope and a Ne^{22} isotope in substantially equal ~~proportions~~ proportions; and

~~wherein the optical elements during operation of the optical apparatus cause~~ at least one optical feedback element which receives light output from the laser and returns at least 0.1% of the light output of the laser ~~to be returned~~ towards the laser.